

What is claimed is:

1. An ID registration method for an ID collation system which includes a receiver receiving information transmitted from a transmitter, checks an ID  
5 contained in the information received by the receiver, and performs predetermined processing designated by said information based on check result of ID, comprising the steps of:

switching said transmitter into an ID registration mode and also switching said receiver into an ID transmission mode;

10 causing said receiver to transmit a collation ID determined based on an ID assigned inherently to said receiver;

causing said transmitter to receive said collation ID transmitted from said receiver and store the received collation ID as a registered ID of said transmitter.

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2. An ID collation system comprising:

a transmitter for transmitting information;

a receiver for receiving the information transmitted from said transmitter;

20 a control apparatus for checking an ID contained in the information received by the receiver and performing predetermined processing designated by said information based on check result of ID;

a transmitter mode switching apparatus for switching said transmitter into an ID registration mode; and

25 a receiver mode switching apparatus for switching said receiver into an ID transmission mode,

wherein said receiver comprises an ID transmitting apparatus for transmitting a collation ID being determined based on an ID assigned inherently to said receiver and used in ID checking when the receiver is  
30 switched into the ID transmission mode by said receiver mode switching apparatus, and

said transmitter comprises an ID receiving apparatus for receiving the

collation ID transmitted from said receiver when said transmitter is switched into the ID registration mode by said transmitter mode switching apparatus, and an ID registration apparatus for storing the collation ID received by said ID receiving apparatus as a registered ID of said transmitter.

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3. A vehicle control system comprising:

a transmitter for transmitting information required to control a device installed in a vehicle;

10 a receiver installed in a vehicle body for receiving the information transmitted from said transmitter;

a control apparatus installed in the vehicle body for checking an ID contained in the information received by the receiver with reference to a collation ID and executing control of said device according to said information based on check result of ID;

15 a transmitter mode switching apparatus for switching said transmitter into an ID registration mode; and

a receiver mode switching apparatus for switching said receiver into an ID transmission mode,

20 wherein said receiver comprises an ID transmitting apparatus for transmitting said collation ID used in ID checking when said receiver is switched into the ID transmission mode by said receiver mode switching apparatus, and

25 said transmitter comprises an ID receiving apparatus for receiving said collation ID transmitted from said receiver when said transmitter is switched into the ID registration mode by said transmitter mode switching apparatus, and an ID registration apparatus for storing the collation ID received by said ID receiving apparatus as a registered ID of said transmitter,

30 wherein said device installed in a vehicle is a pneumatic air pressure monitoring apparatus for displaying monitoring result with respect to an air pressure of a tire installed in said vehicle,

said transmitter is incorporated in a pneumatic pressure sensor attached to said tire, and

said control apparatus executes control for the display of monitoring result with respect to the air pressure of the tire installed in said vehicle when the information received by said receiver is confirmed based on the result of ID checking as being transmitted from the pneumatic pressure sensor attached to said tire.

4. The vehicle control system in accordance with claim 3, wherein said collation ID is transmitted to said transmitter via a transmitter antenna provided in a tire house of said vehicle.

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5. A vehicle control system comprising:

a transmitter for transmitting information required to control a device installed in a vehicle;

a receiver installed in a vehicle body for receiving the information transmitted from said transmitter;

a control apparatus installed in the vehicle body for checking an ID contained in the information received by the receiver with reference to a collation ID and executing control of said device according to said information based on check result of ID;

a transmitter mode switching apparatus for switching said transmitter into an ID registration mode; and

a receiver mode switching apparatus for switching said receiver into an ID transmission mode,

wherein said receiver comprises an ID transmitting apparatus for transmitting said collation ID used in ID checking when said receiver is switched into the ID transmission mode by said receiver mode switching apparatus, and

said transmitter comprises an ID receiving apparatus for receiving said collation ID transmitted from said receiver when said transmitter is switched into the ID registration mode by said transmitter mode switching apparatus, and an ID registration apparatus for storing the collation ID received by said ID receiving apparatus as a registered ID of said transmitter,

wherein said device installed in a vehicle is a keyless entry apparatus for executing contactless lock/unlock of a vehicle door,

said transmitter is incorporated in an electronic key, and

said control apparatus executes the contactless lock/unlock of the vehicle door based on checking result of ID of the electronic key contained in the information received by said receiver.

6. A vehicle control system comprising:

a transmitter for transmitting information required to control a device installed in a vehicle;

a receiver installed in a vehicle body for receiving the information transmitted from said transmitter;

a control apparatus installed in the vehicle body for checking an ID contained in the information received by the receiver with reference to a collation ID and executing control of said device according to said information based on check result of ID;

a transmitter mode switching apparatus for switching said transmitter into an ID registration mode; and

a receiver mode switching apparatus for switching said receiver into an ID transmission mode,

wherein said receiver comprises an ID transmitting apparatus for transmitting said collation ID used in ID checking when said receiver is switched into the ID transmission mode by said receiver mode switching apparatus, and

said transmitter comprises an ID receiving apparatus for receiving said collation ID transmitted from said receiver when said transmitter is switched into the ID registration mode by said transmitter mode switching apparatus, and an ID registration apparatus for storing the collation ID received by said ID receiving apparatus as a registered ID of said transmitter,

wherein said device installed in a vehicle includes a pneumatic air pressure monitoring apparatus for displaying monitoring result with respect to an air pressure of a tire installed in said vehicle and a keyless entry apparatus

for executing contactless lock/unlock of a vehicle door,

said transmitter is incorporated in a pneumatic pressure sensor attached to said tire and also in an electronic key, and

5        said control apparatus executes control for the display of monitoring  
result with respect to the air pressure of the tire installed in said vehicle when  
the information received by said receiver is confirmed based on the result of  
ID checking as being transmitted from the pneumatic pressure sensor attached  
to said tire, and also executes the contactless lock/unlock of the vehicle door  
when the information received by said receiver is confirmed based on the result  
10    of ID checking as being transmitted from an authorized electronic key.

7. The vehicle control system in accordance with claim 3, wherein said  
collation ID is determined based on an ID assigned inherently to said receiver.

15        8. The vehicle control system in accordance with claim 3, wherein said  
collation ID is transmitted to said transmitter via a predetermined external  
device.

9. The vehicle control system in accordance with claim 8, wherein said  
20    external device is detachably connected via a signal line to said receiver and  
to said transmitter.

10. The vehicle control system in accordance with claim 9, wherein  
said transmitter mode switching apparatus is provided in said transmitter  
25    while said receiver mode switching apparatus is provided in said receiver, and  
said external device comprises a trigger signal transmitting apparatus  
which transmits a trigger signal for causing said transmitter mode switching  
apparatus to switch said transmitter into the ID registration mode and a trigger  
signal for causing said receiver mode switching apparatus to switch said  
30    receiver into the ID transmission mode.

11. A pneumatic tire pressure monitoring apparatus comprising:

a receiver for receiving an air-pressure signal transmitted together with a sensor ID from a pneumatic pressure sensor of each tire installed in a vehicle;

a control apparatus for checking whether or not a received sensor ID agrees with the sensor ID of the pneumatic pressure sensor of said tire installed in the vehicle, and for executing control for monitoring an air pressure of said tire with reference to said air-pressure signal based on check result of ID;

a receiver mode switching apparatus for switching said receiver into an ID transmission mode; and

an ID transmitting apparatus for transmitting a collation ID used in ID checking when said receiver is switched into the ID transmission mode by said receiver mode switching apparatus,

wherein said collation ID is determined based on an ID assigned inherently to said receiver.

12. A pneumatic tire pressure sensor comprising:

a pressure sensor for detecting an air pressure of a tire;

an ID memory for storing a transmitter ID;

a transmitting circuit for transmitting the air pressure of the tire detected by said pressure sensor together with the transmitter ID stored in said ID memory;

a receiving circuit for receiving a collation ID transmitted from a pneumatic tire pressure monitoring apparatus; and

a transmitter ID registering apparatus for registering said collation ID received via said receiving circuit as a transmitter ID and storing the registered transmitter ID in said ID memory.

13. The pneumatic tire pressure sensor in accordance with claim 12, wherein

said receiving circuit receives a signal via a cable, and

said ID memory is a rewritable memory element having an overwriting function for renewing the data stored therein.

14. An ID registration tool for a pneumatic tire pressure monitoring system including a pneumatic pressure sensor attached to a tire of a vehicle and a pneumatic tire pressure monitoring apparatus installed in a vehicle body to receive an air-pressure signal transmitted from said pneumatic pressure sensor  
5 together with a transmitter ID of said pneumatic pressure sensor, thereby monitoring an air pressure of the tire, in which said ID registration tool is used for registering a collation ID between said pneumatic tire pressure monitoring apparatus and said pneumatic pressure sensor,

wherein said ID registration tool comprises:

10 an ID transmission requesting apparatus for requesting said pneumatic tire pressure monitoring apparatus to transmit the collation ID used in ID checking;

an ID receiving circuit for receiving the collation ID transmitted from said pneumatic tire pressure monitoring apparatus in response to a request of  
15 said ID transmission requesting apparatus; and

an ID transmitting circuit for transmitting the collation ID received by said ID receiving circuit to said pneumatic pressure sensor.

20 15. The vehicle control system in accordance with claim 5, wherein said collation ID is determined based on an ID assigned inherently to said receiver.

16. The vehicle control system in accordance with claim 6, wherein said collation ID is determined based on an ID assigned inherently to said receiver.

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17. The vehicle control system in accordance with any claim 5, wherein said collation ID is transmitted to said transmitter via a predetermined external device.

30 18. The vehicle control system in accordance with claim 6, wherein said collation ID is transmitted to said transmitter via a predetermined external device.